

Substitute for form 1449A/PTO

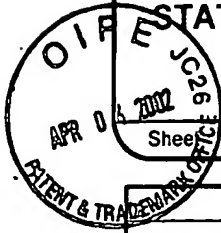
INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 8

Complete if Known

Application Number	10/056,438
Filing Date	January 23, 2002
First Named Inventor	Hong Zhang et al.
Group Art Unit	Unknown - 2121
Examiner Name	Unknown HOLMES
Attorney Docket Number	02331-0302 (42286/267666)



U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code ² (if known)			
MBA	A1	US-6,115,488	09/05/2000	Steven Rogers	
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			

RECEIVED

APR 12 2002

Technology Center 2100

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)				

Examiner Signature		Date Considered	1/4/05
--------------------	--	-----------------	--------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04.
³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

as many sheets as necessary)

Sheet 2

of 8

Complete if Known

Application Number	10/056,438
Filing Date	January 23, 2002
First Named Inventor	Hong Zhang et al.
Group Art Unit	Unknown 2121
Examiner Name	Unknown HOLMES
Attorney Docket Number	02331-0302 (42286/267666)

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
MBAI	B1	ADEL, M. et al. Quality Control of Mammographic Images: Automated Detection of Microcalcifications in Phantom Images, IWDM 2000, Fifth International Workshop on Digital Mammography, June 2000, p. 34.	
MBAI	B2	BLOT, L. and ZWIGGELAAR, R. Extracting Background Texture in Mammographic Images: A Co-occurrence Matrices Based Approach, IWDM 2000, Fifth International Workshop on Digital Mammography, June 2000, p. 38	
MBAI	B3	BOTTEMA, M.J. and SLAVOTINEK, J.P. Detection of Microcalcifications Associated with Cancer, IWDM 2000, Fifth International Workshop on Digital Mammography, June 2000, p. 37.	
MBAI	B4	BRUYNOOGHE, M. High Resolution Granulometric Analysis for Early Detection of Small Microcalcification Clusters in X-ray Mammograms, IWDM 2000, Fifth International Workshop on Digital Mammography, June 2000, p. 38.	
MBAI	B5	CAMPANINI, R. et al. Automatic Detection of Clustered Microcalcifications Using a Combined Method with a Support Vector Machine (SVM) Classifier, IWDM 2000, Fifth International Workshop on Digital Mammography, June 2000, p. 39.	
MBAI	B6	FIELDS, S. et al. Analysis of Computer Extracted Features Related to Size of Micro-Calcifications: Correlation with Pathologic Diagnosis, IWDM 2000, Fifth International Workshop on Digital Mammography, June 2000, p. 41.	
MBAI	B7	FUKUOKA, D. et al. Automated Detection and Classification of Masses on Breast Ultrasonograms and its 3D Imaging Technique, IWDM 2000, Fifth International Workshop on Digital Mammography, June 2000, p. 42.	
MBAI	B8	GIGER, M.L. et al. Computerized Classification of Lesions on Digital Mammography, IWDM 2000, Fifth International Workshop on Digital Mammography, June 2000, p. 43.	
MBAI	B9	HAGIHARA, Y. et al. Accurate Detection of Microcalcifications on Mammograms by Improvement of Morphological Processing, IWDM 2000, Fifth International Workshop on Digital Mammography, June 2000, p. 44.	
MBAI	B10	HARA, T. et al. Automated Classification Method of Mammographic Microcalcifications by Using Artificial Neural Network and ACR BI-RADS Criteria of Microcalcification Distribution, IWDM 2000, Fifth International Workshop on Digital Mammography, June 2000, p. 45.	
MBAI	B11	HATANAKA, Y. et al. An Automatic Detection Algorithm for Masses with a Partial Loss of Region on Mammograms, IWDM 2000, Fifth International Workshop on Digital Mammography, June 2000, p. 46.	

Examiner
Signature

[Signature]

Date
Considered

1/4/05

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(as many sheets as necessary)

3 of 8

Complete if Known

Application Number	10/056,438
Filing Date	January 23, 2002
First Named Inventor	Hong Zhang et al.
Group Art Unit	Unknown 2121
Examiner Name	Unknown HOLMES
Attorney Docket Number	02331-0302 (42286/267666)

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
MBR	B12	HOLMES, A.S. and TAYLOR, D.J. Computer-Aided Diagnosis: An Improved Metric Space for Pixel Signatures, IWDM 2000, Fifth International Workshop on Digital Mammography, June 2000, p. 49.	
MBR	B13	KAUFMANN, G.H. et al. Automated Detection and Classification of Clustered Microcalcifications Using Morphological Filtering and Statistical Techniques, IWDM 2000, Fifth International Workshop on Digital Mammography, June 2000, p. 53.	
MBR	B14	PETRICK, N. et al. Preclinical Evaluation of a CAD Algorithm for Early Detection of Breast Cancer, IWDM 2000, Fifth International Workshop on Digital Mammography, June 2000, p. 63.	
MBR	B15	SAHINER, B. et al. Active Contour Models for Segmentation and Characterization of Mammographic Masses, IWDM 2000, Fifth International Workshop on Digital Mammography, June 2000, p. 68.	
MBR	B16	JIANG, Y. et al. Computer-Aided Diagnosis of Malignant and Benign Microcalcifications in Small-Field Digital Mammograms, IWDM 2000, Fifth International Workshop on Digital Mammography, June 2000, p. 51.	
MBR	B17	LEE, G.N. and BOTTEMA, M.J. Classification of Masses in Screening Mammograms as Benign or Malignant, IWDM 2000, Fifth International Workshop on Digital Mammography, June 2000, p. 54.	
MBR	B18	LU, S. and BOTTEMA, M.J. Classifying Lobular and DCIS Microcalcifications, IWDM 2000, Fifth International Workshop on Digital Mammography, June 2000, p. 56.	
MBR	B19	RACZ, J. et al. Computer Aided Diagnosis Based on Analysis of Microcalcifications, IWDM 2000, Fifth International Workshop on Digital Mammography, June 2000, p. 67.	
MBR	B20	SENDRA, F. et al. Methodology of Interactive Segmentation and Feature Analysis of Masses in Digitized Mammograms, IWDM 2000, Fifth International Workshop on Digital Mammography, June 2000, p. 70.	
MBR	B21	VALVERDE, F.L. et al. Elimination of Calcified False Positives in Detection of Microcalcifications in Mammograms Using Hough Transform, IWDM 2000, Fifth International Workshop on Digital Mammography, June 2000, p. 72.	
MBR	B22	VELDKAMP, W.J.H., KARSSEMEIJER, N., and HENDRIKS, J.H.C.L. Fully Automated Classification of Microcalcification Cases Referred from a Nation-Wide Screening Program, IWDM 2000, Fifth International Workshop on Digital Mammography, June 2000, p. 73.	

Examiner
SignatureDate
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 4 of 8

Complete if Known

Application Number	10/056,438
Filing Date	January 23, 2002
First Named Inventor	Hong Zhang et al.
Group Art Unit	Unknown 2121
Examiner Name	Unknown HOLMES
Attorney Docket Number	02331-0302 (42286/267666)

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
MB	B23	VELTHUIZEN, R.P. Computer Description of Mammographic Masses, IWDM 2000, Fifth International Workshop on Digital Mammography, June 2000, p. 74.	
MB	B24	WOO, J.H. et al. Evaluation of the Architecture Similarity Between Left and Right Breast, IWDM 2000, Fifth International Workshop on Digital Mammography, June 2000, p. 75.	
MB	B25	MUDIGONDA, N.R., RANGAYAN, R.M., and DESAUTELS, J.E.L. Segmentation and classification of mammographic masses, <i>Medical Imaging 2000: Image Processing</i> , Proc. SPIE Vol. 3979, February 2000, pp 55 - 67.	
MB	B26	VELTHUIZEN, R. and GANGADHARAN, D. Mammographic mass classification: initial results, <i>Medical Imaging 2000: Image Processing</i> , Proc. SPIE Vol. 3979 (2000), pp 68 - 76.	
MB	B27	HUO, Z. and GIGER, M.L. Incorporation of clinical data into a computerized method for the assessment of mammographic breast lesions, <i>Medical Imaging 2000: Image Processing</i> , Proc. SPIE Vol. 3979 (2000), pp 152.	
MB	B28	LO, J.Y., LAND, W.H., and MORRISON, C.T.. Evolutionary programming technique for reducing complexity of artificial neural networks for breast cancer diagnosis, <i>Medical Imaging 2000: Image Processing</i> , Proc. SPIE Vol. 3979 (2000), pp 153 - 158.	
MB	B29	ZHOU, C. et al. Computerized image analysis: Estimation of breast density on mammograms, <i>medical imaging 2000: Image Processing</i> , Proc. SPIE Vol. 3979 (2000), pp 1615 - 1624.	
MB	B30	SIVARAMAKRISHNA, R. et al. Comparing the Performance of Mammographic Enhancement Algorithms, <i>American Journal of Roentgenology</i> (2000), Vol. 175, pp 45 - 51.	
MB	B31	FLOYD, C.E., JR, LO, J.Y., and TOURASSI, G.D. Case-Based Reasoning Computer Algorithm that Uses Mammographic Findings for Breast Biopsy Decisions, <i>American Journal of Roentgenology</i> (2000), Vol. 175, pp. 1347 - 1352.	
MB	B32	GOOD, W.F. et al. Detection of Masses and Clustered Microcalcifications on Data Compressed Mammograms, <i>American Journal of Roentgenology</i> (2000), Vol. 175, pp 1537 - 1576.	
MB	B33	LEAVERS, V.F. Use of the Two-dimensional Radon Transform to Generate a Taxonomy of Shape for the Characterization of Abrasive Powder Particles, <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , Vol. 22, No. 12, December 2000, pp 1411 - 1423.	

Examiner Signature	<i>[Signature]</i>	Date Considered	1/4/05
--------------------	--------------------	-----------------	--------

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet

5

of

8

Complete if Known

Application Number	10/056,438
Filing Date	January 23, 2002
First Named Inventor	Hong Zhang et al.
Group Art Unit	Unknown- 2121
Examiner Name	Unknown- HOLMES
Attorney Docket Number	02331-0302 (42286/267666)

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
MBAH	B34	ABDOLMALEKI, P. et al. Neural network analysis of breast cancer from MRI findings, <i>Radiat. Med.</i> , Sept. – October 1997, Vol. 15 No. 5, pp 283 – 293.	
MBAH	B35	ARANA, E. et al. Calvarial eosinophilic granuloma: diagnostic models and image feature selection with a neural network, <i>Acad. Radiol.</i> June 1998, Vol. 5, No. 6, pp. 427 – 434.	
MBAH	B36	BARRA, V. and BOIRE, J.Y. Tissue segmentation on MR images of the brain by possibilistic clustering on a 3D wavelet representation, <i>J. Magn. Reson. Imaging</i> , March 2000, Vol. 11, No. 3, pp 267 – 278.	
MBAH	B37	CHAN, H.P. et al. Computer-aided detection of mammographic microcalcifications: pattern recognition with an artificial neural network, <i>Med. Phys.</i> , October 1995, Vol. 22, No. 10, pp. 1555-1567.	
MBAH	B38	CHAN, H.P. et al. Computerized classification of malignant and benign microcalcifications on mammograms: texture analysis using an artificial neural network, <i>Phys. Med. Biol.</i> , March 1997, Vol. 42, No. 3, pp. 549 – 567.	
MBAH	B39	CHAN, H.P. et al. Computerized analysis of mammographic microcalcifications in morphological and texture feature spaces, <i>Med. Phys.</i> , October 1998, Vol. 25, No. 10, pp 2007 – 2019.	
MBAH	B40	CHANG, Y.H. et al., Identification of clustered microcalcifications on digitized mammograms using morphology and topography-based computer-aided detection schemes. A preliminary experiment, <i>Invest. Radiol.</i> October 1998, Vol. 33, No. 10, pp 746 – 751.	
MBAH	B41	DAWSON, A.E., AUSTIN, R.E., JR., and WEINBERG, D.S. Nuclear grading of breast carcinoma by image analysis. Classification by multivariate and neural network analysis, <i>Am. J. Clin. Pathol.</i> , April 1991, Vol. 95,4 Suppl. 1, S29 – 37.	
MBAH	B42	DECAESTECKER, C. et al. Improving morphology-based malignancy grading schemes in astrocytic tumors by means of computer-assisted techniques, <i>Brain Pathol.</i> , January 1998, Vol. 8, No. 1, pp 29 – 38.	
MBAH	B43	FOGEL, D.B. et al. Linear and neural models for classifying breast masses, <i>IEEE Trans. Med. Imaging</i> , June 1998, Vol. 17, No. 3, pp 485 – 488.	
MBAH	B44	FREED, K.S. et al., Predictive model for the diagnosis of intraabdominal abscess, <i>Acad. Radiol.</i> , July 1998, Vol. 5, No. 7, pp 473 – 479.	

Examiner
SignatureDate
Considered

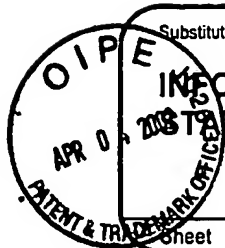
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	10/056,438
		Filing Date	January 23, 2002
		First Named Inventor	Hong Zhang et al.
		Group Art Unit	Unknown <u>2121</u>
		Examiner Name	Unknown <u>HOLMES</u>
		Attorney Docket Number	02331-0302 (42286/267666)
Sheet	6	of	8



OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
<u>MBA</u>	B44	GAVRIELIDES, M.A. et al. Segmentation of suspicious clustered microcalcifications in mammograms, <i>Med. Phys.</i> , January 2000, Vol. 27, No. 1, pp 13 – 22.	
<u>MBA</u>	B45	GOLAY, X. et al. A new correlation-based fuzzy logic clustering algorithm for fMRI, <i>Magn. Reson. Med.</i> , August 1998, Vol. 40, No. 2, pp 249 – 260.	
<u>MBA</u>	B46	HEATHFIELD, H.A., WINSTANLEY, G. and KIRKHAM, N. Computer-assisted breast cancer grading, <i>J. Biomed. Eng.</i> , October 1988, Vol. 10, No. 5, pp 379 – 386.	
<u>MBA</u>	B47	HEITMANN, K.R. et al. Automated detection of spleen volume by spiral CT scans using neural networks and "fuzzy logic", <i>Rofo Fortschr. Geb. Rontgenstr. Neuen. Bildgeb. Verfahr.</i> , February 2000, Vol. 172, No. 2, pp 139 – 146.	
<u>MBA</u>	B48	HENSCHKE, C.L., et al. Neural networks for the analysis of small pulmonary nodules, <i>Clin. Imaging</i> , November-December 1997, Vol. 21, No. 6, pp 390 – 399.	
<u>MBA</u>	B49	ISHIDA, T. et al. Application of artificial neural networks for quantitative analysis of image data in chest radiographs for detection of interstitial lung disease, <i>J. Digit. Imaging</i> , November 1998, Vol. 11, No. 4, pp 182 – 192.	
<u>MBA</u>	B50	JIANG, Y. et al. Malignant and benign clustered microcalcifications: automated feature analysis and classification, <i>Radiology</i> , March 1996, Vol. 198, No. 3, pp 671 – 678.	
<u>MBA</u>	B51	JIANG, Y. et al. Improving breast cancer diagnosis with computer-aided diagnosis, <i>Acad. Radiol.</i> January 1999, Vol. 6, No. 1, pp 22 – 33.	
<u>MBA</u>	B52	KALMAN, B.L. et al. Prescreening entire mammograms for masses with artificial neural networks: preliminary results, <i>Acad. Radiol.</i> , June 1997, Vol. 4, No. 6, pp 405 – 414.	
<u>MBA</u>	B53	KIM, J.K. and PARK, H.W. Statistical textural features for detection of microcalcifications in digitized mammograms, <i>IEEE Trans. Med. Imaging</i> , March 1999, Vol. 18, No. 3, pp 231 – 238.	
<u>MBA</u>	B54	KOPANS, D.B. Double reading, <i>Radiol. Clin. North Am.</i> , July 2000, Vol. 38, No. 4, pp 719 – 724.	

RECEIVED
 APR 12 2002
 Technology Center 2100

Examiner Signature	<u>[Signature]</u>	Date Considered	<u>1/4/05</u>
--------------------	--------------------	-----------------	---------------

¹ EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

² Unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet

7

of

8

Complete if Known

Application Number	10/056,438
Filing Date	January 23, 2002
First Named Inventor	Hong Zhang et al.
Group Art Unit	Unknown- 2121
Examiner Name	Unknown- HODUMES
Attorney Docket Number	02331-0302 (42286/267666)

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
MEB	B55	KOVALERCHUK, B. et al. Fuzzy logic in computer-aided breast cancer diagnosis: analysis of lobulation, <i>Artif. Intell. Med.</i> , September 1997, Vol. 11, No. 1, pp 75 – 85.	
MEB	B56	LAU, T.K. and BISCHOF, W.F. automated detection of breast tumors using the asymmetry approach, <i>Comput. Biomed. Res.</i> , June 1991, Vol. 24, No. 3, pp 273 – 295.	
MEB	B57	MADSEN, M.T. et al. Pulmonary CT image classification with evolutionary programming, <i>Acad. Radiol.</i> , December 1999, Vol. 6, No. 12, pp 736 – 741.	
MEB	B58	NGAN, S.C. and HU, X. Analysis of functional magnetic resonance imaging data using self-organizing mapping with spatial connectivity, <i>Magn. Reson. Med.</i> , May 1999, Vol. 41, No. 5, pp 939 – 946.	
MEB	B59	O'LEARY, T.J., MIKEL, U.V., and BECKER, R.L. Computer-assisted image interpretation: use of a neural network to differentiate tubular carcinoma from sclerosing adenosis, <i>Mod. Pathol.</i> , July 1992, Vol. 5, No. 4, Pp 402 – 405.	
MEB	B60	PANTAZOPOULOS, D. et al. Back propagation neural network in the discrimination of benign from malignant lower urinary tract lesions, <i>J. Urol.</i> , May 1998, Vol. 159, No. 5, pp 1619 – 1623.	
MEB	B61	PATRICK, E.A. et al. Expert learning system network for diagnosis of breast calcifications, <i>Invest. Radiol.</i> , June 1991, Vol. 26, No. 6, pp 534 – 539.	
MEB	B62	PAVLOPOULOS, S. et al. Fuzzy neural network-based texture analysis of ultrasonic images, <i>IEEE Eng. Med. Biol. Mag.</i> , January-February 2000, Vol. 19, No. 1, pp 39 – 47.	
MEB	B63	QIAN, W. et al. Digital mammography: comparison of adaptive and nonadaptive CAD methods for mass detection, <i>Acad. Radiol.</i> , August 1999, Vol. 6, No. 8, pp 471 – 480.	
MEB	B64	SCOTT, J.A. Using artificial neural network analysis of global ventilation-perfusion scan morphometry as a diagnostic tool, <i>AJR Am. J. Roentgenol.</i> , October 1999, Vol. 173, No. 4, pp 943 – 948.	
MEB	B65	VAN TONDER, G.J. and EJIMA, Y. The patchwork engine: image segmentation from shape symmetries, <i>Neural Netw.</i> , April 2000, Vol. 13, No. 3, pp 291 – 303.	

Examiner
SignatureDate
Considered

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 8 of 8

Complete if Known

Application Number	10/056,438
Filing Date	January 23, 2002
First Named Inventor	Hong Zhang et al.
Group Art Unit	Unknown 2121
Examiner Name	Unknown HOLMES
Attorney Docket Number	02331-0302 (42286/267666)

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
WBA	B66	VELTHUIZEN, R.P., HALL, L.O., and CLARKE, L.P. Feature extraction for MRI segmentation, <i>J. Neuroimaging</i> , April 1999, Vol. 9, No. 2, pp 85 - 90.	
WBA	B67	WOLBERG, W.H. and STREET, W.N. Image analysis and machine learning applied to breast cancer diagnosis and prognosis, <i>Anal. Quant. Cytol. Histol.</i> , April 1995, Vol. 17, No. 2, pp 77 - 87.	
WBA	B68	WU, Y.C., DOI, K., and GIGER, M.L. Detection of lung nodules in digital chest radiographs using artificial neural networks: a pilot study, <i>J. Digit. Imaging</i> , May 1995, Vol. 8, No. 2, pp 88 - 94.	
WBA	B69	WU, Y. et al. Computerized detection of clustered microcalcifications in digital mammograms: applications of artificial neural networks, <i>Med. Phys.</i> , May - June 1992, Vol. 19, No. 3, pp 555 - 560.	
WBA	B70	WU, Y. et al. artificial neural networks in mammography: application to decision making in the diagnosis of breast cancer, <i>Radiology</i> , April 1993, Vol. 187, No. 1, pp 81 - 87.	
WBA	B71	YOSHIDA, H. et al. An improved computer-assisted diagnostic scheme using wavelet transform for detecting clustered microcalcifications in digital mammograms, <i>Acad. Radiol.</i> , August 1996, Vol. 3, No. 8, pp 621 - 627.	
WBA	B72	ZHANG, W. et al. Computerized detection of clustered microcalcifications in digital mammograms using a shift-invariant artificial neural network, <i>Med. Phys.</i> , April 1994, Vol. 21, No. 4, pp 517 - 524.	
WBA	B73	ZHANG, W. et al. An improved shift-invariant artificial neural network for computerized detection of clustered microcalcifications in digital mammograms, <i>Med. Phys.</i> , April 1996, Vol. 23, No. 4, pp 595 - 601.	
WBA	B74	HARDIN, R.W. Computer-aided diagnosis becomes a reality in mammography, <i>SPIE OE Reports</i> , June 1999, No. 186	

Examiner Signature		Date Considered	1/4/05
--------------------	---	-----------------	--------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.